

KRAMER, MIHALYNE

HUNGARY

3

TARJAN, Robert; KRAMER, Mihalyne; SZOKE, Sandorne;  
LINDNER, Karoly

National Nutrition and Diet Institute (Orszagos Elelmezes  
es Taplalkozastudomanyi Intezet), (Director: Prof. Robert  
Tarjan, MD), for all.

Budapest, Gyermekegyorvaszat (Pediatrics), No 4, Apr 63,  
pp 119-128.

"Composition of Human Milk and Its Change Under the Effect  
of Various Factors: I. Effect of Consumption of High-Vitamin  
Foods on the Composition of Mother's Milk"

(4)

TARJAN, Robert; KRAMER, Mihalyne; SZOKE, Sandorne; LINDNER, Karoly

Composition and changes in human milk due to various factors..  
I. Effect of consumption of foods with high vitamin content on  
the human milk. Gyermekgyogyaszat 14 no.4:119-122 Ap '63.

1. Orszagos Elelmezes es Taplalkozastudomanyi Intezet (Igazgato:  
Prof. Tarjan Robert dr.).

(MILK, HUMAN)	(DIET)	(VITAMIN A)	(RIBOFLAVIN)
(ASCORBIC ACID)	(CITRUS FRUITS)	(CAROTENE)	

HUNGARY

KRAMER, Miklos: National Koranyi To Institute, Biochemical Department  
(Orszagos Koranyi TBC Intezet Biokemiai Osztalya), Budapest.

"Molecular Genetics."

Budapest, A Magyar Tudomanyos Akademia Biologiai Tudomanyok Osztalyanak  
Kozlemenyei, Vol VI, No 1-2, 1963, pages 93-129.

Abstract: Following a short discussion in which some basic facts concerning the cell and the function of DNA are presented, the structure of DNA and the mechanism of replication are discussed. In the chapter on DNA as hereditary substance: transformation, lysogeny, transduction, conjugation and episome elements are described in detail. The chapter dealing with the analysis of the concept of the gene presents the analysis of gene structure, recombination and mutation. Regulation on the genetic level is also discussed by the author. The article was presented at the meeting of molecular biologists in Tihany, Hungary. No references.

HUNGARY

CSANYI, Vilmos, KRAMER, Miklos, STRAUB, Ferenc, Bruno; Medical University of Budapest, Institute of Medical Chemistry (Budapesti Orvostudományi Egyetem, Orvosi Vegytani Intézet).

"Uptake and Distribution of Nucleic Acids by B. Cereus Cells."

Budapest, Acta Physiologica Academiae Scientiarum Hungaricae, Vol XXIII, No 4, 1963, pages 323-332.

Abstract: [English article, authors' English summary modified] There occurs a high incorporation of P<sup>32</sup> into the DNA fraction of B. cereus cells when a fully P<sup>32</sup> labelled phenol-RNA from the same species is added to the culture. The phenomenon occurs only if the receptor cells are pretreated with RNase. The incorporation into DNA can be inhibited by chloramphenicol and 8-azaguanine. The labelling of the DNA is the result of a selective uptake of the DNA present in trace amounts in the RNA of B. cereus, regardless of the methods of purification used by the authors. DNA has to be in a highly polymeric state to be taken up selectively by the receptor cells. The possible mechanism and the biological significance of the effect are discussed. 2 Hungarian, 20 Western references.

1/1

6

GALA, Aleksandar, sanitetski pukovnik d-r; KRAMER, Mirko, sanitetski pukovnik  
d-r; JOVANOVIĆ, Dušan, sanitetski potpukovnik; SKODRIĆ, Sveto,  
sanitetski major d-r; COSIĆ, Vojislav, sanitetski major.

Our experience with early diagnosis of trinitrotoluene (TNT)  
in workers. Voj.san.pregl., Beogr. 17 no.4:474-482. Ap '60.

1. Higijensko-hemiski institut; Odeljenje za higijenu rada ;  
Interna klinika - toksikolosko odeljenje.  
(TRINITROTOLUENE toxicol.)

KRAMER, Mirko, sanitetski pukovnik, dr.; COSIC, Vojislav, sanitetski  
potpukovnik, dr.

A case of poisoning with castor seeds. Vojnosanit. pregl. 19  
no.1:53-54 Ja '62.

1. Vojnomedicinska akademija u Beogradu, Klinika za unutrašnje  
bolesti.

(RICINUS toxicol)

S

COSIC, Vojislav, sanitetski potpukovnik, dr.; KRAMER, Mirko, sanitetski pukovnik, dr.; GALA, Aleksandar, sanitetski pukovnik, docent, dr.

Effect of radar installations on the human body and results of our studies. Vojnosanit. pregl. 20 no.3:119-126 Mr '63.

1. Vojnomedicinska akademija u Beogradu, Higijensko-hemijski institut, Odeljenje za medicinu rada, Klinika za unutrašnje bolesti.

(RADAR)

S

COSIC, Vojislav, sanitetski potpukovnik, dr.; JELACIC, Olga, vojni  
sluzbenik I klase, docent, dr.; KRAMER, Mirko, sanitetski  
pukovnik, dr.; MILENKOVIC, Dusan, mr. ph.

Clinical, patho-anatomical and chemo-toxicological considerations  
on 5 cases of ethylene glycol antifreeze poisoning. Vojnosanit.  
pregl. 21 no.12:775-781 D '64.



KRAMER, M. V.

Tidal Tides of the Earth and the Ocean (1977) in Moscow (For Details) by the Soviet Scientists, A. E. Catonovskiy, A. E. Catonovskiy, and L. E. Kramers (in Russian) (in Russian).

Tidal Tides of the Earth and the Ocean (1977) in Moscow (For Details) by the Soviet Scientists, A. E. Catonovskiy, A. E. Catonovskiy, and L. E. Kramers (in Russian) (in Russian).

Results of Observations of Tidal Tides of the Earth and the Ocean (1977) in Moscow (For Details) by the Soviet Scientists, A. E. Catonovskiy, A. E. Catonovskiy, and L. E. Kramers (in Russian) (in Russian).

Observations of the Tidal Tides of the Earth and the Ocean (1977) in Moscow (For Details) by the Soviet Scientists, A. E. Catonovskiy, A. E. Catonovskiy, and L. E. Kramers (in Russian) (in Russian).

Tidal Variations of the Tidal Tides of the Earth and the Ocean (1977) in Moscow (For Details) by the Soviet Scientists, A. E. Catonovskiy, A. E. Catonovskiy, and L. E. Kramers (in Russian) (in Russian).

Observations of Tidal Tides of the Earth and the Ocean (1977) in Moscow (For Details) by the Soviet Scientists, A. E. Catonovskiy, A. E. Catonovskiy, and L. E. Kramers (in Russian) (in Russian).

Tidal Variations of the Tidal Tides of the Earth and the Ocean (1977) in Moscow (For Details) by the Soviet Scientists, A. E. Catonovskiy, A. E. Catonovskiy, and L. E. Kramers (in Russian) (in Russian).

Papers Presented at First Meeting of Permanent Commission on Earth Tides, Trieste, Italy, 6-11 July 1969, under the sponsorship of the Intl Union of Geology and Geophysics (IUGG).

PERTSEV, B.I.; PARIYSKIY, N.N.; KRAMER, M.V.

Comparing different methods of harmonic analysis of tidal deformations  
of the earth. Izv. AN SSSR. Ser.geofiz. no.2:242-243 7 '59.  
(MIRA 12:2)

1. AN SSSR Institut fiziki Zemli.  
(Tides)

22402

S/035/61/000/005/039/042

A001/A101

3,1800

AUTHORS: Pariyskiy, N.N., Dobrokhotoy, Yu.S., Pertsev, B.P., Kramer, M.V.,  
Belikov, B.D., Barsenkov, S.N.

TITLE: Observations of tidal gravity variations at Krasnaya Pakhra

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 5, 1961, 33, ab-  
stract 50215 (V sb. "Gravimetr. issledovaniya", no. 1, Moscow, AN  
SSSR, 1960, 21 - 26, Engl. summary)

TEXT: Observations were conducted in a special basement near Moscow in 4  
km from Krasnaya Pakhra. Six monthly series of observations with four GS-11 gravi-  
meters were made at various times from December 1957 to February 1959. The gravi-  
meters were calibrated in the vertical gravimetric polygon at the MGU building.  
The harmonic analysis of tidal variations was performed on an electronic computer.  
The following mean values of quantities being determined  $\delta = 1-3/2k + h$  and phase  
shifts  $\Delta\varphi$  were obtained;

for diurnal waves  $\delta = 1.163 \pm 0.016$ ;  $\Delta\varphi = 1^{\circ}.5 \pm 0^{\circ}.7$   
for semidiurnal waves  $\delta = 1.180 \pm 0.018$ ;  $\Delta\varphi = 4^{\circ}.1 \pm 1^{\circ}.0$

[Abstracter's note: Complete translation]

B. Pertsev

Card 1/1

S/035/61/000/004/056/058  
A001/A101

AUTHORS: Pariyskiy, N.N., Pertsev, B.P., Gridnev, D.G., Kramer, M.V., Barsenkov, S.N.,

TITLE: Gravity tidal variations at Alma-Ata

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 4, 1961, 36, abstract 40229 (V sb. "Gravimetr. issledovaniya", no. 1, Moscow, AN SSSR, 1960, 27 - 33, Engl. summary)

TEXT: Observations of gravity tidal variations were conducted at the Astrophysical Institute, 6 km from Alma-Ata. Two GS-11 gravimeters were used in observations which continued from October 1958 to May 1959. Harmonic analysis of the first five monthly series of observations yielded the following values of the quantities sought for  $\delta = 1-3/2k+h$  and phase shifts  $\Delta\varphi$ : from diurnal waves  $\delta = 1.131 \pm 0.006$ ,  $\Delta\varphi = 0.6 \pm 0.4$ ; from semidiurnal waves  $\delta = 1.160 \pm 0.008$ ,  $\Delta\varphi = +4.1 \pm 0.3$ .

B. Pertsev

[Abstracter's note: Complete translation]

Card 1/1

2240A

S/035/61/000/005/038/042

AS01/A101

3,1800

AUTHORS: Dobrokhotov, Yu.S., Belikov, B.D., Kramer, M.V., Pertsev, B.F.

TITLE: Observations of tidal variations of gravity acceleration at Pulkovo in 1958

PERIODICAL: Referativnyy zhurnal. Astronomiya i Gecdeziya, no. 5, 1961, 33, abstract 5G214 (V sb. "Gravimetr. issledovaniya", no. 1, Moscow, AN SSSR, 1960, 7 - 14, Engl. summary)

TEXT: Observations of gravity tidal variations were conducted at Pulkovo in the basement of the seismic station from April to October, 1958. Two gravimeters of GC-11 type were employed. The tides were recorded first by means of photoelectrical recorders of the firm Bruno Lange and then by means of photorecorders developed in the Institut fiziki Zemli (Institute of Physics of the Earth). Altogether 8 monthly series of continuous observations were made during this period. The harmonic analysis of observations was performed on an electronic computer. The analysis yielded the following mean values of quantities  $\bar{O} = 1 - 3/2k + h$  and phase shifts of main waves of the lunar-solar tide:

Card 1/2

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S/03/61/000/005/038/042  
A001/A101

Observations of tidal variations ...

Wave	Phase shift		
$K_1$	$1.194 \pm 0.012$	$+ 2.6 \pm 0.6$	
$O_1$	$1.180 \pm 0.008$	$+ 1.8$	1.1
$M_2$	$1.238$	$0.017 + 2.1$	0.9
$S_2$	$1.217$	$0.042 + 1.6$	2.1
$N_2$	$1.222$	$0.076 + 6.0$	4.0

Positive phase shifts correspond to lag of observed tides relative to theoretical ones.

B. Pertsev

[Abstracter's note: Complete translation]

Card 2/2

MOLODENSKIY, Mikhail Sergeyevich; ~~KRAMER~~, Marianna Vasil'yevna; RYVKIN, A.Z.,  
red. izd-va; ROMANOV, G.N., tekhn. red.

[Terrestrial tides and the ~~rotation~~ of the earth's axis] Zemnye pri-  
livy i mutatsiya Zemli. Moskva, Izd-vo Akad. nauk SSSR, 1961. 39 p.  
(MIRA 14:8)

(Nutation)

(Tides)

SOV/49-59-2-8/25

AUTHORS: Pertsev, B. P., Pariyskiy, N. N., Kramer, M. V.

TITLE: Comparison Between Various Methods of Harmonic Analysis of the Tidal Deformation of the Earth (Sravneniye razlichnykh metodov garmonicheskogo analiza prilivnykh deformatsiy zemli)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 2, pp 242-243 (USSR)

ABSTRACT: In order to define the accuracy of the harmonic analysis of the elastic tides of the Earth, a comparison was made of the methods described by A. T. Doodson, G. W. Lennon, R. Lecolazet and B. P. Pertsev (Refs 1-4). The theoretical tide was calculated for  $V_2$ , taking account of the components of the Moon and Sun for every hour during 30 days, starting from midnight on January 1, 1955, for  $\varphi = 45^\circ$  and  $\lambda = 0^\circ$ . To simplify the work, the value of:

$$G = -\frac{3}{4} \frac{M}{E} - \frac{ga^2}{c^3}$$

was taken as unity. In addition, the potential for 19, 21 and

Card 1/3



SOV/49-59-2-8/25

Comparison Between Various Methods of Harmonic Analysis of the Tidal Deformation of the Earth

23 hours on December 31, 1954 was included. The analysis was carried out only for  $M_2$ ,  $S_2$ ,  $N_2$ ,  $K_1$  and  $O_1$ , as suggested by the International Geophysical Year Committee. The results are given in the table on p 243, where the first (top) and the second (bottom) approximations are shown for every method (except Lennon's). The first column gives the difference between the observed wave amplitudes and their theoretical value  $\delta_{\text{theo}} - \delta_{\text{obs}} = \Delta\delta$ . In the case of the Lecolazet method, these data were calculated from the expressions at the lower half of p 242 (wave  $K_1$ , R and  $\delta$ ). The first approximation given in the table for the waves of similar frequency was excluded, i.e.  $K_2$  and  $T_2$  from  $S_2$ ;  $P_1$  from  $K_1$ ;  $\nu_2$  from  $N_2$ . The second approximation was calculated when the disturbing waves given by Lecolazet (Ref 3, Tables VIII-XI) were excluded in addition to the previous ones. Thus, as it can be seen from the method 3 in the Table, the second approximation gives much better results, which can be further improved when the other waves

Card 2/3

SOV/49-59-2-8/25

Comparison Between Various Methods of Harmonic Analysis of the Tidal Deformation of the Earth

of a similar frequency (  $R_2$ ,  $\pi_1$  ;  $\phi_1$  ;  $\mathbb{I}_1$  and  $OO_1$  ) are considered. As an example, the inclusion of these waves in the Doodson and Pertsev methods gives improved results for the waves  $S_2$  and  $K_1$  . There is 1 table; there are 4 references, of which 1 is Soviet, 1 French and 2 English.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki Zemli (Academy of Sciences USSR, Institute of Physics of the Earth)

SUBMITTED: August 15, 1957.

Card 3/3

KRAMER, M.V.; PARIYSKIY, N.N., doktor fiz.-mat. nauk, otv. red.

[Tables of tidal changes caused by the sun and the moon on a solid earth in 1962. (for a point with coordinates  $50^{\circ}$  N. lat.,  $0^{\circ}$  long)] Tablitsy prilivnykh izmenenii sily tiazhesti ot luny i solntsa dlia absolutno tverdoi Zemli na 1962.g. (dlia punkta s koordinatami  $\varphi=50^{\circ}$  s.sh;  $\lambda=0^{\circ}$ )  
Moskva, Akad.nauk SSSR, 1962. 49 p. (MIRA 163)  
(Tides--Tables)

ACCESSION NR: AR 4020763

S/0169/64/000/001/G027/G027

SOURCE: RZh. Geofizika, Abs, 10186

AUTHORS: Pariyskiy, N. N.; Gridnev, D. G.; Barsenkov, S. N.; Sary\*cheva, Yu. K.; Kramer, M. V.

TITLE: Tidal variations of the force of gravity in Tashkent

CITED SOURCE: Sb. Izuch. zemn. prilivov. No. 3. M., AN SSSR, 1963, 9-39

TOPIC TAGS: Tidal gravity variation, gravimeter

TRANSLATION: Results are given of an analysis of observations of tidal variations of gravity in Tashkent carried out at the Astronomical Observatory with two Askaniy gravimeters in the course of 7 months. Each gravimeter was used to carry out 16 monthly analyses by two methods: that of Pertsev and that of Lekalaze. The agreement between the results obtained by the two methods was very good. On the average, the Pertsev method gave  $\delta = 1.148 \pm 0.001_2$ , and the Lekalaze method gave  $\delta = 1.147 \pm 0.001_3$  for the waves

Card 1/2

ACCESSION NR: AR4020763

$M_2$ ,  $S_2$ , and  $O_1$ .

The value of  $\delta$  obtained in this work and greater by 1% than the value published earlier (see preceding report) is explained by the larger volume of processed data and principally by the fact that the effect of the instrument drift on the determination of the calibration factors was taken into account, using the method due to Yu. S. Dobrokhotoy. —

DATE ACQ: 03Mar64

SUB CODE: AS

ENCL: 00

Card 2/2

L 36376-66 EWT(m)

ACC NR: AF6017588

SOURCE CODE: UR/0367/66/003/002/0199/0208

AUTHOR: Balodis, M. K.; Kramer, N. D.; Prokof'yev, P. T.; Fayner, U. M.

ORG: Institute of Physics, Academy of Sciences Latvian SSR (Institut fiziki Akademii nauk Latvyskoy SSR)

TITLE: Multipolarities of the lower transitions in the  $\text{Lu}^{176}(n,\gamma)\text{Lu}^{177}$  reaction

SOURCE: Yadernaya fizika, v. 3, no. 2, 1966, 199-208

TOPIC TAGS: lutetium, neutron interaction, gamma interaction, deformed nucleus, conversion electron spectrum, multipole order, nuclear spin, nuclear energy level

ABSTRACT: In view of the interest attaching to the level scheme of the  $\text{Lu}^{177}$  nucleus in connection with studies of the lower levels of odd deformed nuclei, the authors have investigated the spectrum of the conversion electrons emitted when  $\text{Lu}^{176}$  nuclei capture thermal neutrons. A magnetic beta spectrometer was used in the energy range 30 - 450 kev, described by the authors earlier (Izv. AN SSSR seriya fiz. v. 28, 262, 1964). The electrons were recorded with photographic emulsions. The coefficients of internal conversion and the multipolarities of the transitions were determined from the relative intensities of the conversion electrons and gamma rays, and a table listing the internal conversion lines is presented. The results show that the decay scheme of  $\text{Lu}^{177}$  consists of three rotational bands. The multipolarities of transitions between levels with spin difference  $\Delta I = 1$  within each band is of the mixed  $M1 + E2$  type, while transitions with  $\Delta I = 2$  have multipolarity  $E2$ . Certain levels ob-

Card 1/2

L 36376-66

ACC NR: AP6017588

served by other investigators do not fit within the proposed level scheme and the reasons for the discrepancies are discussed. Orig. art. has: 1 figure and 2 tables.

SUB CODE: 20/ SUBM DATE: 07Jun65/ ORIG REF: 002/ OTH REF: 010

*red*  
Card 2/2

ACC NR: AP6036983

(A,N)

SOURCE CODE: UR/0181/66/008/011/3350/3353

AUTHOR: Grinberg, A. A.; Kramer, N. I.

ORG: Physicotechnical Institute im. A. F. Ioffe AN SSSR, Leningrad (Fiziko-  
tekhnicheskiiy institut AN SSSR)

TITLE: Photoionization of shallow impurity level in semiconductors with participation  
of phonons

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3350-3353

TOPIC TAGS: light absorption, absorption coefficient, impurity center, photo-  
ionization, phonon interaction, electron interaction, temperature dependence

ABSTRACT: The authors consider the absorption of light by shallow impurities in  
semiconductors. In view of the fact that the experimental coefficient of absorption  
of photons by shallow impurities does not agree with theory based on direct photon  
capture, the authors evaluate the effect that phonons play on the photon absorption  
probability. It is shown that the phonon can impart to the impurity electron a large  
momentum, and thus make a noticeable contribution to the corresponding ionization  
probability, in spite of the fact that the electron-phonon interaction itself is small.  
It is shown further that when the electron energy greatly exceeds the ionization  
energy the process proceeds predominantly with participation of phonons. In the case

Card 1/2



ACC NR: AP6036983

of low temperature, the absorption coefficient is proportional to the reciprocal of the frequency ( $\omega$ ), whereas without allowance for the phonons it is proportional to  $\omega^{-3.5}$ . In the case of high temperatures and the scattering is by acoustic phonons, the absorption cross section decreases. Comparison of the theoretical calculations with experimental data confirm the correctness of the calculations. The authors thank A. A. Klyuchikhin and O. V. Konstantinov for a useful discussion. Orig. art. has: 1 figure and 5 formulas.

SUB CODE: 20/ SUBM DATE: 12Mar66/ OTH REF: 004

Card 2/2

L 27730-66 EWT(1)/T IJP(c)

ACC NR: AP6015480

SOURCE CODE: UR/0181/66/008/005/1555/1561

AUTHOR: Grinberg, A. A.; Kramer, N. I.

ORG: Physicotechnical Institute im. A. F. Ioffe AN SSSR, Leningrad (Fiziko-tekhni-cheskiy institut AN SSSR)

TITLE: Light-light scattering in semiconductors and insulators

SOURCE: Fizika tverdogo tela, v. 8, no. 5, 1966, 1555-1561

TOPIC TAGS: neodymium, light scattering, laser optics, phonon scattering, semiconductor laser

ABSTRACT: The authors consider photon-photon scattering in insulating crystals. The process is caused by the polarizability of the crystal due to virtual transitions of electrons from the valence band to the conduction band. The dipole approximation is used for calculating the scattering cross section. It is shown that the scattering of phonons with energy  $\hbar\omega$  much less than the width of the forbidden band is proportional to  $\omega^6$ . When  $\hbar\omega_1 + \hbar\omega_2 \lesssim E_g$ , the cross section is of the order of  $10^{-28} \text{ cm}^2$ .

The practical feasibility of using a neodymium laser for observing photon-photon scattering is evaluated. The number of quanta scattered at the interaction of two light beams with volume  $V$  in a time  $t$  where the intensities of the beams (in  $\text{kw/cm}^2 \cdot \text{sec}$ )

Card 1/2

L 27730-66

ACC NR: AP6015480

are  $I_1$  and  $I_2$  is equal to

$$\Delta N = \frac{I_1 I_2 n}{c_0} \sigma V t$$

where  $n$  is the refractive index. A neodymium laser with a power of  $10^6$  w gives  $I_1 = I_2 = 10^{24}$  kw/cm<sup>2</sup> sec for a time  $t \sim 10^{-3}$  sec for a focusing area of 10 cm<sup>2</sup>. For the given scattering cross section,  $n=3$ ,  $V=30$  cm<sup>3</sup> and  $\Delta N=3 \cdot 10^8$ . Orig. art. has: 2 figures, 11 formulas. [14]

SUB CODE: 20/

SUBM DATE: 01Jul65/

ORIG REF: 002/

OTH REF: 013/

ATD PRESS: 5002

Card 2/2

B.L.G.

L 20471-66 EWT(1)/ECG GW  
ACC NR: AP6012050

SOURCE CODE: UR/0362/65/001/011/1205/1208

AUTHOR: Laykhtman, D. L.; Gisina, F. A.; Kramer, N. I.

ORG: Leningrad Hydrometeorological Institute, Leningrad (Leningradskiy gidrometeorologicheskii institut)

TITLE: Allowance for characteristics of atmospheric turbulence in computing intensity and height of factory stacks

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 1, no. 11, 1965, 1205-1208

TOPIC TAGS: atmospheric diffusion, air pollution, atmospheric turbulence, energy distribution

ABSTRACT: In the investigation of diffusion processes in the atmosphere a serious difficulty encountered is that the spatial scales of turbulent fluctuations vary in a wide range; from  $10^{-1}$  to  $10^6$  m. It has been established experimentally that the distribution of turbulent energy in fluctuations of different scales has a minimum in the region of meso-scales. This gives basis for study of diffusion processes by dividing the entire range of scales into two parts. In the small-scale region the diffusion of an impurity from the sources at distances not more than 10-50 km can be described by the ordinary diffusion equation with the introduction of the vertical coefficient of turbulent viscosity. This makes it possible to determine the concentration of an impurity,

Card 1/2

UDC: 551.551.8

L 20471-66

ACC NR: AP6012050

averaged for a short (5-10 min) period of time coinciding with the period of averaging of the meteorological parameters included in the equation. The effects caused by large eddies then can be taken into account statistically. As an example of such an approach the authors consider the problem of the distribution of the concentration of a passive impurity from a continuous point source for long periods of time (season, year). Characteristics of this type are needed in planning factories whose stack products contaminate the atmosphere. Proper stack height for a given admissible discharge must be computed. The method presently used for this purpose is unsatisfactory because in long intervals of time the complex of meteorological conditions changes in very wide limits. The correct approach should be based on calculation of the probability of occurrence of different meteorological conditions. The parameters of the planned factory should be selected in such a way that in the direction of maximum wind frequency the maximum surface concentration with a given probability does not exceed the admissible value. Numerical solution of the problem is given. Orig. art. has: 1 figure and 13 formulas. [JPRS]

SUB CODE: 04, 13, 20 / SUBM DATE: 19May65 / ORIG REF: 005 / OTH REF: 001

Card 2/2 *Lgc*

BYUTNER, I.K.; KRAMER, N.I.

Calculation of the horizontal scattering of particles from  
an immobile source according to data of meteorological  
measurements. Trudy GGO no.167:178-183 '65.

(MIRA 19:1)

KRAMER, S.I.

Distribution of instantaneous values of the concentration  
of pollution in the atmosphere. Trudy GGO no.167:195-200  
'65. (MIRA 19:1)

LAYKHTMAN, D.L.; GISINA, F.A.; KRAMER, N.I.

Account of the characteristics of atmospheric turbulence in calculating the output and height of chimneys of industrial plants. Izv. AN SSSR. Fiz. atm. i okeana 1 no.11:1205-1208 N '65. (MIRA 18:12)

1. Leningradskiy gidrometeorologicheskii institut. Submitted May 19, 1965.



L 13113-66 EWT(1)/EWP(m)/EPF(n)-2/T IJP(c)

ACC NR: AP6000854

SOURCE CODE: UR/0181/65/007/012/3562/3565

AUTHOR: Kramer, N. I.

ORG: Physicotechnical Institute im. A. F. Ioffe AN SSSR Leningrad  
(Fiziko-tekhnicheskii institut AN SSSR)

TITLE: Absorption of light, connected with the interaction with the carriers, in semiconductors with 'forbidden' optical transitions.

SOURCE: Fizika tverdogo tela, v. 7, no. 12, 1965, 3562-3565

TOPIC TAGS: optic transition, light absorption, allowed band, forbidden transition, conduction band, electron recombination, temperature dependence

ABSTRACT: The absorption of photons with energy deficit  $\Delta\epsilon$ , brought about by a mechanism proposed by S. M. Ryvkin and the author (FTT v. 7, 2195, 1965 and v. 7, 1278, 1965) is calculated in second order perturbation theory, under the assumption that the matrix element of the 'forbidden' optical transition is proportional in the dipole approximation to the quasimomentum of the initial state of the electron. It is assumed that the main contribution of the matrix element is made, with allowance for exchange terms by the processes in which the photon pro-

Card 1/2

L 13113-66

ACC NR: AP6000854

2  
duce electron-hole pairs with subsequent scattering of the electron or the hole by the electron in the conduction band, and also the process of interband optical transition with subsequent recombination of the hole with the carrier and creation of a new pair. A formula is derived for the temperature dependence of the absorption cross section on the energy deficit  $\Delta\epsilon$  for different values of the electron temperature, and it is shown that the temperature dependences of the cross section are the same for forbidden and allowed transitions. Author is grateful to S. M. Ryvkin and A. A. Grinberg for interest in the work and useful discussions. Orig. art. has: 1 figure, 6 formulas, and 1 table.

SUB CODE: 20/ SUBM DATE: 10Jun65/ ORIG REF: 003/ OTH REF:002

Card

2/2 HW

KRAMER, N.I.

Determination of the parameters of horizontal scattering from observations of the velocity of wind gustiness. Trudy Len.gidromet.inst. no.18:112-117 '63. (MIRA 18:1)

KRAMER, N.I.; PONOMAREVA, S.M.

Experimental investigations of the air pollution in the area of a regional electric power station. Trudy len.giuremet.inst. no.18:151-160 '63. (MIRA 18:1)

ACCESSION NR: AP4042018

S/0020/64/157/001/0079/0082

AUTHORS: Grinberg, A. A.; Kramer, N. I.

TITLE: Acousto-magnetic effect in piezoelectric semiconductors

SOURCE: AN SSSR. Doklady\*, v. 157, no. 1, 1964, 79-82

TOPIC TAGS: piezoelectric effect, semiconductor, indium antimonide, semiconductor conductivity, carrier density, ultrasonic wave propagation

ABSTRACT: The effect described is present only in piezoelectric semiconductors with bipolar conductivity, the properties of which have not yet been treated in the literature. It consists in the fact that if ultrasound is transmitted through a piezoelectric placed in a magnetic field in a direction perpendicular to the magnetic field, then an electric field is produced in the third direction. The reason for the current is the deflection of the electrons and

Card 1/4

ACCESSION NR: AP4042018

holes which are dragged by the ultrasonic waves in opposite directions, which produces a potential difference. The electromagnetic equations are solved in the case of a one-dimensional model of a piezoelectric with equal electron and hole densities. Formulas are derived for the coefficient of absorption (amplification) of the ultrasound, for the current density, and for the acousto-magnetic field. The results show that in case of piezoelectric interaction the absorption coefficient at fixed frequency decreases with the increasing carrier density, whereas the absorption coefficient due to the deformation potential (which is present in all semiconductors) increases. In InSb, the acousto-magnetic effect in the region of presently available ultrasound frequencies is determined completely by the deformation potential, and not by the piezomechanical property. Orig. art. has: 3 figures and 11 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicotechnical Institute, Academy of Sciences, SSSR)

Cord 2/4

ACCESSION NR: AP4042018

SUBMITTED: 31Jan64

ENCL: 01

SUB CODE: SS

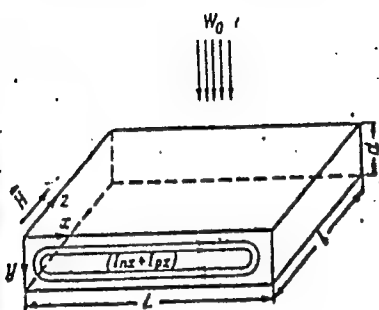
NR REF SOV: 007

OTHER: 006

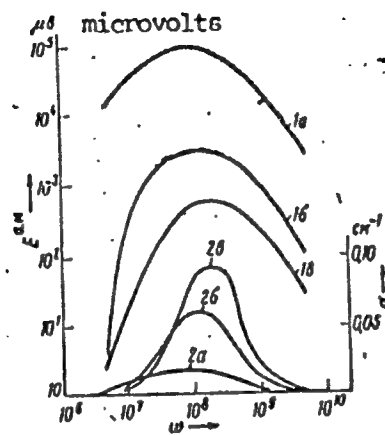
Card 3/4

ACCESSION NR: AP4042018

ENCLOSURE: 01



Relative directions of fields and current



Dependence of acousto-magnetic voltage (curves 1) and of coefficient of ultrasound absorption (curves 2) on the frequency for three values of the concentration.

Card 4/4



L 63512-65 EWT(1)/T/EWA(h) Pa-6/Pah IJP(a) AT  
 ACCESSION NR: AP3017319 UR/0181/65/007/007/2195/2205

AUTHOR: Ryvkin, B. M.; Grinberg, A. A.; Kramer, N. I.

TITLE: Indirect optical transitions in semiconductors accompanied by interaction with charge carriers

SOURCE: Fizika tverdogo tela, v. 7, no. 7, 1965, 2195-2205

TOPIC TAGS: semiconductor, indirect transition, free carrier, optical transition, semiconductor laser

ABSTRACT: A new indirect transition mechanism in semiconductors involving free carriers rather than phonons is analyzed. It is shown that absorption and emission of photons with energies less than the width of the forbidden gap accompanied by transfer of energy and momentum between electrons (holes) and free carriers is possible. A cross section is calculated for capture of photons as a result of such transitions averaged over the energies of electrons (holes). It is pointed out that absorption of photons by means of such a process can be achieved by applying an electric field to a sample which has been cooled to a low temperature in order to generate the hot electrons required for such a transition. The possibility of an

Card 1/2

L 63512-65

ACCESSION NR: AP5017319

indirect free-carrier-assisted transition laser is discussed in another paper (A.A. Grinberg, et al. FTT, v. 7, no. 7, 1965, 2206). Orig. art. has: 20 formulas, 5 figures, and 1 table. [CS]

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad  
(Physicotechnical Institute, AN SSSR)

SUBMITTED: 23Feb65

ENCL: 00

SUB CODE: SS, EC

NO REF SOV: 002

OTHER: 007

ATD PRESS: 4049

Card 2/2

KRAMER, O.P.

~~"ORONTSOV-VEL'~~YAMINOV, B.; KRINOV, E.; KRAMER, O.

"Spectrophotometry of the continuous spectrum of Nova Herculis 1934," Astron. Zhur., 16, No. 3, 1939. (submitted May 1938, Moscow)

Report U-1518, 23 Oct. 1951

KRAMER, O.P.

"Preliminary results of examination of astroclimate of Central Asia," Astron. Zhur.,  
17, No 3, 1940

FRANER, O. P.

"On the Polarization of the Light Reflected by the Moon," Dok. Akad. Nauk, Vol.  
40, No. 4, 1943 (Inst. Astronomy & Physics, Kazakh Affil., Acad. Sci., 1943)

KRAMER, O. P. Cand. Physicomath. Sci.

Dissertation: "Numerical Integration of the differential Equations of a Certain Particular Type." Mathematical Inst. imeni V. A. Steklov, Acad. Sci. USSR.  
12 Jun, 1947

SO: Vechernyaya Moskva, Jun. 1947 (Project #17836)

KRAMER, O. P.

Kramer, O. P. An application of S. A. Karakur's method of numerical integration of certain ordinary differential equations. *Dokl. Akad. Sci. USSR, Ch. Sci. Tech. [Izvestia Akad. Nauk SSSR]* 1947, 600-604 (1947). (Russian)

Karakur's method is applied to the numerical solution of the equations of exterior ballistics in the form  $dx/dt = -kv$ ,  $dv/dt = -g - kv$ ,  $dy/dt = v$ , in which  $k$  is a function of velocity  $v$  and of the altitude  $y$ . The idea is to solve the above equations as ordinary linear differential equations treating the function  $k$  as though it were a known function of the time  $t$ . The actual numerical work is carried out by a step-by-step process using equally spaced values of the time. For the first three steps, the quantity  $e^{-kt}$ , where  $k = f(t, y)$ , is represented by a power series, and formulas are given for the computation of the coefficients. For further steps the procedure for finding  $e^{-kt}$  is essentially the integration of an extrapolated polynomial with subsequent corrections. An elaborate chart of formulas is provided for carrying out these steps. The method is illustrated by the numerical solution of a problem in ballistics.

W. E. Milne

Smul  
Lef

Source: *Mathematical Reviews*, 1948, 11 Vol. 9, No. 2



KRAMKOV, O.P.

growing and investigation of single crystals of ferroelectric materials. A. D. Nersisyan, A. A. Bichodskoy, M. I. Bichodskoy, A. G. Vasyukhin and O. P. Kramkov. V. M. Zhukovskiy State University, Tomsk. *Dokl. Akad. Nauk SSSR*, 1977, No. 241, p. 131, 132 (1977). Crystals of BaTiO<sub>3</sub> and their mixtures grown from solas in fused salts are described. Single, double, or double crucibles were used, in the latter case the space between the outer and the inner crucible was filled with substances favoring the diffusion of Ba<sup>2+</sup> and TiO<sub>2</sub> toward one another. The crucibles were heated to 1200-1300° for several days. Ba and Sr titanate crystals can best be grown from solas in molten K<sub>2</sub>CO<sub>3</sub>. BaTiO<sub>3</sub> crystals can be grown with widely different characteristics, such as crystals having a cubic structure at room temp. and crystals having a max. of  $\epsilon$  at -60°. Annealing to 1000, 1100, 1200, or 1300° greatly changes the temp. dependence of  $\epsilon$ . In double crucibles, (100) crystals grown from K<sub>2</sub>CO<sub>3</sub> solas are transparent and have (100) surfaces, whereas crystals grown from K<sub>2</sub>CO<sub>3</sub>-Na<sub>2</sub>CO<sub>3</sub> mixts. are less transparent and they are bounded by (100) and (111) planes.  $\epsilon$  and tan  $\delta$  are different for both types. The dielec. properties of single crystals of solid solas of (Ba/Sr)TiO<sub>3</sub> strongly depend on their heat treatment.

S. P. Kramkov

MT 9R



*Handwritten:* KRAMAROV, O.P.  
PESENKO, Ye.G.; KRAMAROV, O.P.; KHODAKOV, A.L.; SHOLOKHOVICH, M.L.

Certain characteristics of  $PbTiO_3$  single crystals and  $(Ba,Pb)TiO_3$  solid solution single crystals. Izv. AN SSSR. Ser.fiz. 21 no.3:305-310 Apr '57. (MLRA 10:7)

1. Nauchno-issledovatel'skiy fiziko-matematicheskii institut pri Rostovskom n/D gosudarstvennom universitete im. V.M. Molotova.  
(Lead titanate) (Barium titanates)

S/035/62/000/007/063/083  
A001/A101

AUTHOR: Kramer, S.

TITLE: Geodesy and cartography should be raised to a higher level of development

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 7, 1962, 2, abstract 704 ("Vermessungstechnik", 1962, v. 10, no. 1, 1 - 2, German)

TEXT: Decisions of the 22nd Congress of the Communist Party of the Soviet Union which are of high importance not only for the USSR but also for all countries of the Socialistic camp, and decisions of the 14th Plenum of the Central Committee of the SED consider technological progress as having extraordinary importance for the development of material production, raising labor efficiency and cutting down net costs. In order to achieve a further technical progress in fields of geodesy, photogrammetry, engineering geodesy and other scientific-technical works, GDR ought to solve a number of tasks: To extend investigations and to conduct corresponding work on further mechanization and automation of all

Card 1/2

S/035/62/000/007/063/083  
A001/A101

Geodesy and cartography should be...

cartographic-geodetic processes, to develop and introduce into practice a more perfect technique of work taking into account the modern level of engineering development; to elaborate new instructions or to renovate corresponding sections of the instructions being in effect on cartographic-geodetic operations with the aim of maintaining them on the modern level; to carry out a further standardization of cartographic-geodetic works; to elaborate scientifically based technical projects for performance of geodetic works. It is necessary to strengthen relations between science and industry, in order to solve the tasks mentioned. ✓

A. Zenina

[Abstracter's note: Complete translation]

Card 2/2

KRAMER, S.; TOMESCU, V.; DIMA, C.

Antifreeze additive of improved effectiveness and color. Petrol si  
gaze 13 no.9:422-424 S '62.

BABICHEV, N.S., kand.tekhn.nauk; BOBROV, I.V., zasluzhennyy deyatel' nauki i tekhniki USSR; ROSINSKIY, N.L., kand.tekhn.nauk; KRAMER, S.M., inzh.

"Boring and blasting operations" by P.IA.Taranov. Reviewed by N.S.Babichev and others. Ugol' 36 no.3:62 Mr '61. (MIRA 14:5)

1. Donetskij industrial'nyy institut (for Babichev).
2. Makeyevskiy nauchno-issledovatel'skiy institut (for Bobrov, Rosinskiy).
3. Kombinat Stalinugol' (for Kramer).  
(Blasting) (Taranov, P.IA.)

KRAMER, T.

Principal problems of the location of individually owned flour mills.  
p. 22. Vol. 6, no. 12, Dec. 1955 Warszawa GOSPODARKA ZABOZOWA

SOURCE: East European Accession List (EEAL) Library of Congress  
Vol. 5, no. 8, August 1956

KRAMER, T.

Principal problems of the location of the individually owned  
flour mills. Pt. 2. p. 26.

GOSPODARKA ZIEZOWA, Vol. 7, no. 2, Feb. 1956.

POLAND

SOURCE: EAST EUROPEAN ACCESSIONS LIST LC Vol. 5, no. 7, August 1956.

KRAMER, T.

Some grain problems; the example of Poznan Voivodeship. p. 5.  
Organization of the grain trade in Hungary. p. 7. GOSPODARKA  
ZBOZOWA. Vol. 7, No. 6, June 1956. Warszawa.

East European Accessions List (EEAL) Library of Congress  
Vol. 5, No. 11, August 1956.



KRAMER, T.

KRAMER, T. The location of flour mills in Poland during the interwar period p. 10

Vol 7, no. 12, Dec. 1956

GOSPODARKA ZBOZOWA

AGRICULTURE

Warszawa, Poland

So: East European Accession vol 6, no. 3, March 1957

YUGOSLAVIA/Nuclear Physics - Installations and Instruments.  
Methods of Measurement and Research.

C-

Abs Jour : Ref Zhur Fizika, No 3, 1960, 5143

Author : Debenec L. Kramer, V., Marsel, J., Vrscaj, V.

Inst : -

Title : Mass Spectrometric Measurements of UF<sub>6</sub>

Orig Pub : Repts. LL J. Stefan 77 Inst., 1958, 5, 33-39

Abstract : A Nier-type 60° mass spectrometer with a resolution of 350 was used to measure the isotopic ratio U<sup>238</sup>/U<sup>235</sup> when UF<sub>6</sub> is introduced into the instrument. The UF<sub>6</sub> can be introduced in a viscous stream through two capillaries, from vessels located in a thermostatic bath. One vessel contains UF<sub>6</sub> with natural contents of isotopes. The measurement of the isotopic ratio was carried out by comparing the intensity of the mass lines 330 and 383 in multiple magnetic or electric scanning. For exact measurements of small differences in the isotopic ratios of two specimens,

Card 1/2

- YUGOSLAVIA/Nuclear Physics - Installations and Instruments.  
Methods of Measurement and Research.

C-

Abs Jour : Ref Zhur Fizika, No 3, 1960, 5143

use was made of the method of successive inlet of the samples. The "memory" effect of the instrument to old, previously admitted samples, was investigated. It is shown that in the case of a small difference in the isotopic ratios of the specimen, it is enough to stop the apparatus for two minutes for evacuation between measurements. It is established that the isotopic ratio  $U^{238}/U^{235}$  in natural uranium is  $138.2 \pm 0.4$ . Ye.L. Frankevich

Card 2/2

- 14 -

40544

S/261/62/000/016/001/003  
1007/1207

26 2180

AUTHOR: Kramer, Werner

TITLE: Test results of single stage radial fans

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 34. Kompressory i kholodil'naya tekhnika, no. 16, 1962, 6, abstract 341639. (Prace Inst. techn. ciepl., no. 15, 1961, v 9, 65-79 [Polish, resumes in Russian and English])

TEXT: Results are reported on testing (in 1958) a single-stage radial fan manufactured by the Leipzig Pump and Compressor Plant. The experiments covered the following problems: testing of blade diffusers; measurement of flow through the intake spiral-casing; selection of impeller type for the given spiral casing with the same blade angle at varying blade-width; variation of operational characteristics when several inter-blade ports (channels) are switched off; and impeller tests to select the optimum intake conditions. An impeller with a peripheral speed of 277 m/sec (1400 rpm) was tested. It was found that the spiral casing for single-stage fans should be designed assuming a constant momentum, and an allowable divergence angle of diffuser larger than the value obtained by Eckert. A flat characteristic curve for this type of fan may be obtained by reducing the length of the intake flap. Different computation methods are required in cases in which the calculation of the blade angle (at a small blade number) gives results differing from experimental values. For design it is suitable to apply the method of conformal reproduction of the axial cascade on the

Card 1/3

Test results of...

S/261/62/000/016/001/003  
1007/1207

circular-blade cascade by means of the Konig function, which enables the designer to use preliminary theoretical results in solving the problem involved. From the diagram "lift coefficient versus  $l/p$  ratio and blade setting angle  $\alpha$ ," it is learned that optimum fan-efficiency is related to the relative drag coefficient. As a result of differing friction conditions in axial and radial cascades, the deviation of the measured coefficients from the predicted values becomes evident. This was the reason for investigating four versions of radial cascades with differing  $l/p$  ratios related to the reproduction on the flat cascade. On the basis of investigations conducted to determine the influence of lateral clearance limits (0 to 28 mm), it was found that lateral clearances lead to stabilization of the boundary layer, which is particularly remarkable under partial-load conditions. In order to reduce a series of standard sizes of single-stage fans, without changing the requirements as to various fan parameters apart from conventional means (alteration of inlet and outlet angles, machining of impeller to change its diameter), a method may be applied in which a certain number of inter-blade ports of the impeller are switched off and their width is reduced. Tests were carried out with successive switching off of the inter-blade ports of an 18-blade fan-impeller. With the increase in the number of switched-off blade ports, the delivery decreases linearly as a function of the ratio of the free (actual) surface at the suction side of the rated surface. At a fan-delivery reduction of about 50%, the fan efficiency decreased by 17%. It was found that if the wheel hub at the inlet side was not sufficiently rounded off,

Card 2.3

Test results of...

S/261/62/000/016/001/003  
1007/1207

the flow velocity about the hub surface sharply increased. This local velocity gain decreases in the subsequent, relatively short, inter-blade channel and by reduction of the radial velocity component. However, the danger appears of detachment of the boundary layer; this danger can be minimized or avoided by increasing the bending (rounding-off) radius of the inlet hub. Another way is to impart a certain acceleration to the inlet channel. According to test results for both alternatives, an increase in the bending radius leads to reduction in the local flow acceleration while an increase in the flow acceleration at the intake channel increases the fan efficiency. With sufficient rounding-off of the inlet hub and an increase of the flow acceleration in the intake channel by about 30%, it is possible to increase the fan efficiency by about 10%. There are 16 figures.

[Abstracter's note: Complete translation.]

X

Card 3/3

ULITSKIY, B.Ye., doktor tekhn.nauk; KRAMER, Ye.L., inzh.; POTAPKIN, A.A.,  
inzh.; SAKHAROVA, I.D., inzh.

Three-dimensional calculation of coreless spans. Avt.dor.  
25 no.4:18-20 Ap '62. (MIRA 15:5)  
(Bridges--Design)

KRAMER, Ye.

V 417 Aquilae. Izv. Astron. obser. 1 no. 1 '47. (MLRA 7:9)  
(Stars, Variable)



KRAMER, Ye.N.

85 Arietis. Izv.astron.obser. 1 no.2:74-78 '48. (MLRA 7:9)  
(Stars, Variable)

REDACTED, Ye. N.

"On the Computation of the Nearest Approach of the Orbits of Earth and a Comet."  
Izv. Turke. FAN SUKH, No. 3(1959), pp. 1-11

KRAMER, Ye.N.

Comet radiants and the relations of meteor streams to comets.  
Izv.Astron.obser. 3:163-247 '53. (MLRA 7:11)  
(Comets) (Meteors)

KRAMER, Ye.N.

Determining the time of a meteor's outburst by using the movable blade of  
an obturator. Astron.tsir. no.135:10-12 F '53. (MLRA 6:6)

1. Odesskaya astronomicheskaya observatoriya pri Gosudarstvennom Universite-  
te imeni I.I. Mechnikova. (Meteors)

KRAMER, Ye.N.

List of the most reliable comet radiants. Astron. tsir. no. 143:  
6-12 N '53. (MLRA 7:8)

1. Odesskaya astronomicheskaya observatoriya.  
(Comets)

KRAMER, Ye.N.

Radiation field of meteor streams. Astron. tsir. no. 144:14-15 D '53.  
(MLRA 7:6)

1. Odesskaya Astronomicheskaya Observatoriya. (Meteors)

KRAMER, Ye.N.

Role of the process of planet formation in the origination  
of minor bodies in the solar system. Trudy AN Tadzh. SSR 20:  
114-124 '54. (MIRA 13:9)  
(Solar system) (Cosmogony)

KHAMER, Ye.N.

Theoretical radiant of comet 1953g Abell. Astron.tsir. no.149:21  
My '54. (MLRA 7:7)

1. Astronomicheskaya Observatoriya Odesskogo Gosudarstvennogo  
Universiteta.  
(Comets--1953)



KRAMER, Ye.N.

Use of Tisserand's criterion in verifying the relationship  
of meteor streams and comets. Astron. tsir. no.153:20-22 0 '54.  
(MLRA 8:5)

1. Astronomicheskaya observatoriya Odesskogo Gosuniversiteta  
imeni I.I.Mechnikova.  
(Meteors) (Comets)

KRAMER, Ye.N.

Radiants of the comets. Trudy Inst. fiz. i geofiz. AN Turk.  
SSR 1:5-72 '55. (MLRA 9:12)

(Comets--Orbits) (Meteors) (Mechanics, Celestial)

KRAMER, Ye.N.

On the variation in color indexes of long-period Mira variables.  
Astron.tsir.no.156:11-15 Ja'55. (MIRA 8:10)

1. Astronomicheskaya observatoriya Odesskogo gosudarstvennogo  
universiteta imeni I.I.Mechnikova  
(Stars, Variable) (Stars--Color)

KRAMER, Ye. N.

Time notations for meteor photographs. Astron. tsirk. no. 169:11-12  
'56. (Metecora) (Astronomical photography) (MIRA 9:10)

KRAMER, Ye.N.

Importance of comets' radiants. *Biul.VAGO* no.17:39-45 '56.

(MIRA 9:9)

1.Astronomicheskaya observatoriya Odesskogo gosudarstvennogo  
universiteta imeni Mechnikova.  
(Comets)

SOV/35-59-8-6487

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959,  
Nr 8, p 55

AUTHOR: Kramer, Ye.

TITLE: Spectrum of the Bolide<sup>12</sup> of October 8, 1956

PERIODICAL: Astron. tsirkulyar, 1958, September 18, Nr 195, pp 23 - 25

ABSTRACT: The spectrum was obtained with one of the short-focus cameras<sup>12</sup> of the meteor patrol of the Odessa Astronomical Observatory. A prism with the refracting angle of  $24^{\circ}$  was mounted in front of the lens of the F-24 type. The radiant was ecliptical and close to the radiant of the Taurids. The brightness of the bolide was  $12^m$ . The length of the photographic trail was 10 to  $12^{\circ}$ . A bright flash was observed in the middle section of the trajectory, and two more bright flashes at its end. The brightness of the bolide was continuously fluctuating, but

Card 1/2

VB

Spectrum of the Bolide of October 8, 1956

SOV/35-59-8-6487

flashes and brightness fluctuations occurred independently of each other. The period of fluctuations was continuously decreasing. The results of the preliminary study of the bolide are presented.

M.V. Savel'yeva

✓B

Card 2/2

KRAMER, Ye.

Equipment for photographing artificial earth satellites.  
Astron. tsir. no.190:14-15 Mr '58. (MIRA 11:9)  
(Artificial satellites) (Astronomical photography)



KRAMER, Ye.

Spectrum of the fireball of October 8, 1956. Astron. tsir. no.195:  
23-25 S '58. (MIRA 12:12)

1. Udesskaya astronomicheskaya observatoriya.  
(Meteorites--Spectra)

KRAMER, Ye.N.

Spectra of three bright meteors. Izv.Astron.obser. 5 no.1:25-29  
'59. (MIRA 16:4)

(Meteors—Spectra)

KRAMER, Ye.N.

Results of studying photographs of the fireball of May 11, 1955.  
Astron.zhur. 37 no.4:736-745 J1-Ag '60. (MIRA 13:8)

1. Odesskiy gosudarstvennyy institut i Odesskaya astronomicheskaya  
observatoriya.

(Meteors--May)

S/035/62/000/004/024/056  
A001/A101

3,2440

AUTHORS: Kramer, Ye. N., Rudenko, O. A., Teplitskaya, R. B.

TITLE: Calculation of geocentric orbital elements of meteors

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 4, 1962, 66,  
abstract 4A552 ("Mezhdunar. geofiz. god. Inform. byul.", 1961,  
no. 3, 71-78, English summary)

TEXT: The authors describe the methods of measuring meteor photographs,  
employed at the Odessa Astronomical Observatory. They present schemes for calcu-  
lating radiant coordinates, altitudes, velocities and dragging of meteors at  
various points of their paths. These quantities are adopted as initial data for  
determining density and temperature of the atmosphere in the meteor zone (70 to  
120 km altitude).

Authors' summary

[Abstracter's note: Complete translation]

Card 1/1

KRAMER, Ye.N.

Observation of the total solar eclipse in Izmail. Astron.tsir.  
no.219:18 Mr '61. (MIRA 14:10)

1. Odesskaya astronomicheskaya observatoriya.  
(Eclipses, Solar--1961)

KRAMER, Ye.N.

Changes in the speeds of the meteors. Astron. tsir. no. 221:2-11  
Ap '61. (IIRA 14:11)

1. Odesskaya astronomicheskaya observatoriya.  
(Meteors)

ASTAPOVICH, I.S.; BAKULIN, P.I.; BAKHAREV, A.M.; BRONSHTEIN, V.A.; BUGOSLAVSKAYA, N.Ya. [deceased]; VASIL'YEV, O.B.; GRISHIN, N.I.; DAGAYEV, M.M.; DUBROVSKIY, K.K. [deceased]; ZAKHAROV, G.P.; ZOTKIN, I.T.; KRISTEL, Ye.N.; KRIKOV, Ye.L.; KULIKOVSKIY, P.G.; KUNITSKIY, R.V.; KUROCHKIN, N.Ye.; ORLOV, S.V. [deceased]; POPOV, P.I.; PUSHKOV, N.V.; RYBAKOV, A.I.; RYABOV, Yu.A.; SYTINSKAYA, N.N.; TSESEVICH, V.P.; SHCHIGOLEV, B.M.; VORONTSOV-VEL'YAMINOV, B.A., red.; POMERAYEVA, G.A., red.; KRYUCHKOVA, V.N., tekhn. red.

[Astronomical calendar; permanent part] Astronomicheskii kalendar'; postoiannaya chast'. Izd. 5., polnost'yu perer. Otv. red. P.I. Bakulin. Red. kol. V.A. Bronshten i dr. Moskva, Gos. izd-vo fiziko-matem. lit-ry, 1962. 771 p. (MIRA 15:4)

(Astronomy—Yearbooks)

S/831/62/000/008/012/016  
E032/E114

3.12.30  
3.12.40

AUTHORS: Kramer, Ye.N., Teplitskaya, R.B., Rudenko, O.A.,  
Izrayetskaya, N.N., and Vorob'yeva, V.A.

TITLE: Photographic observations of meteors of Odessa

SOURCE: Ionosfernyye issledovaniya (meteory). Sbornik statey,  
no.8. V razdel programmy MGG (ionosfera). Mezhdved.  
geofiz. kom. AN SSSR. Moscow, Izd-vo AN SSSR, 1962,  
75-96

TEXT: The Odesskaya astronomicheskaya observatoriya (Odessa  
Astronomical Observatory) has been carrying out photographic  
observations of meteors from three points, namely, Mayaki (A),  
Kryzhanovka (B), and the Botanical Gardens (C). The base-line  
lengths are  $AB = 44896$  m,  $AC = 38622$  m, and  $BC = 13582$  m. Each  
photographic installation consists of four  $HA\Phi A - 3C/25$  (NAFA-3s/25)  
cameras ( $F = 25$  cm,  $D:F = 1:2.5$ , field of view  $39^\circ \times 53^\circ$ ). At the  
point A one of the cameras is pointed towards the zenith and the  
remaining cameras point East, South and West at angles of  $35^\circ$  to the  
vertical. The photographic cameras at points B and C are set up so  
that the common region for all the stations is at a height of

Card 1/3



Photographic observations of ...

S/031/62/000/008/012/016  
E032/E114

80-100 km. All the cameras are fixed. Time markers are produced by a variable shutter. Observations carried out during 1957-1958 show that the NAFA-3s/2j cameras are not sufficiently effective for meteor astronomy. They have inadequate objective resolution and are subject to mechanical vibrations which give rise to defocussing. The vibrational effects were later localised and isolated. The photography was carried out on type ДК (DK) films (sensitivity 300-350 GOST units). The development was carried out automatically. A calendar of the observations is reproduced covering the period July 1957 to December 1958. A detailed algebraic scheme is outlined for the determination of the coordinates, heights, velocities and decelerations. Estimates are also given of experimental errors in these quantities. In a typical case the errors in the height, velocity (at 54.15 km/sec) and deceleration (at 15.2 km/sec<sup>2</sup>) were found to be  $\pm 0.09$  km,  $\pm 0.42$  km/sec and  $\pm 2.6$  km/sec<sup>2</sup> respectively. The magnitude of the meteors was determined with the aid of a special apparatus producing an "artificial meteor". In addition comparisons were made with the diurnal motion of stars (cf. preceding abstract). The atmospheric density was calculated

Card 2/3

Photographic observations of ...

S/831/62/000/008/012/016  
E032/E114

from formulae reported by L.G. Jacchia [Technical reports nos. 2, 3 and 10 (Harvard reprints series II, nos. 26, 31 and 44 respectively)]. Detailed numerical results are reproduced. Altogether 106 base line photographs were obtained, 23 of which were recorded at all three points. A detailed catalogue is reproduced showing the geocentric and heliocentric elements and other information for 16 meteors recorded in 1958. There are 4 figures and 5 tables.

Card 3/3

KRAMER, Ye.N.

Determining the atmospheric density from observations of meteors.  
Geomag.i aer. 2 no.1:134-139 Ja-F '62. (MIRA 15:11)

1. Odesskaya astronomicheskaya observatoriya.  
(Meteors) (Atmosphere--Density)

BABADZEVANOV, P. B.; KASHCHEYEV, B. L.; KRAMER, Ye. N.; TSESEVICH, V. P.

"The Research of the Meteors during the IGY in the USSR."

abstract presented at the 13th Gen Assembly, IUGG, Berkeley, Calif,  
19-31 Aug 63.

BABADZHANOV, Pulat Babadzhanovich; KRAMER, Yefim Naumovich;  
FEDYNSKIY, V.V., doktor fiz.-matem. nauk, otv. red.;  
VERSTAK, G.V., red.; GUS'KOVA, O.M., tekhn. red.

[Collection of articles of the Intergovernmental Committee  
for the Execution of the International Geophysical Year]  
Sbornik statei Mezhdudomstvennogo komiteta po provedeniiu  
Mezhdunarodnogo geofizicheskogo goda. Moskva, Izd-vo AN SSSR.  
No.12[Methods and some results of photographic studies of  
meteors] Metody i nekotorye rezul'taty fotograficheskikh is-  
sledovaniy meteorov. 1963. 140 p. (MIRA 17:2)

1. Akademiya nauk SSSR. Mezhdudomstvennyy komitet po pro-  
vedeniyu Mezhdunarodnogo geofizicheskogo goda. V razdel prog-  
rammy MGG. Ionosfera i meteory.

S/

BOOK EXPLOITATION

AM1037184

Babadzhanov, Pulat Babadzhanovich; Kramer, Yefim Naumovich

Methods and some results of photographic research of meteors (Metody\* i nekotoryye rezul'taty\* fotograficheskikh issledovaniy meteorov), Moscow, Izd-vo AN SSSR, 1963, 140 p. illus. 1,500 copies printed. Series note: Rezul'taty\* issledovaniy po programme Mezhdunarodnogo geofizicheskogo goda. Ionosfera i meteory\*. V razdel programmy\* MGB, Nr. 12.

TOPIC TAGS: meteorology, ionosphere, meteor, interplanetary space, atmospheric density, meteor particle

TABLE OF CONTENTS [abridged]:

Foreword -- 5

Ch. I. Equipment and methods of observations -- 7

Ch. II. Methods of reduction of photographic observations of meteors -- 20

Ch. III. Determination of the physical parameters of the upper layers of the Earth's atmosphere -- 38

Ch. IV. Meteor matter in interplanetary space -- 65

Bibliography -- 82

Card 1/2

AM4037184

Appendices -- 83

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OTHER: 030

SUBMITTED: 17Oct63

NR REF SOV: 021

DATE ACQ: 04Jun64

Card 2/2

S/3010/63/000/013/0043/0048

ACCESSION NR: AT4024454

AUTHOR: Babadzhanov, P. B.; Katasev, L. A.; Konopleva, V. P.; Kramer, Ye. N.

TITLE: Determination of atmospheric density, temperature and pressure from photographic observations of meteors

SOURCE: AN SSSR. Mezhdunarodnyy geofizicheskiy komitet. Geofizicheskiy byulleten', no. 13, 1963, 43-48

TOPIC TAGS: meteorology, meteor, atmospheric density, atmospheric pressure, atmospheric temperature, homogeneous atmosphere

ABSTRACT: Atmospheric density has been determined by Ye. N. Kramer on the basis of 50 photographs of meteors; P. B. Babadzhanov has determined atmospheric density and the height of the homogeneous atmosphere from 34 photographs of meteors; and V. P. Konopleva has obtained similar information from 10 meteor photographs. Kramer's formula is cited and a table of his results given. Babadzhanov's formula for density is also given and a table presents his results. Konopleva's formula and results are also given. Table 4 in the original compares the data obtained by the three authors for intervals of height of 5 km from 65 to 115 km. The results also are shown in Fig. 1 of the Enclosure. The results of all three agree well with Jacchia (Technical Report No. 4, Harvard Reprint, Ser. 11-32, 1949) but  
Card 1/5



ACCESSION NR: AT4024454

systematically differ from the standard atmosphere tables published in the SSSR (1960). The reasons for the difference are discussed. The formula used by Babadzhanov and Konopleva for determining the height of the homogeneous atmosphere ( $H^*$ ) is cited and their results are shown in Table 1 of the Enclosure. These values were used to compute absolute temperatures; results are shown in Fig. 2 of the Enclosure. If density and temperature or the height of the homogeneous atmosphere are known, it is possible to compute pressure by using the formula cited; results are shown in Fig. 3 of the Enclosure. It is shown that the meteor method makes it possible to determine atmospheric density, temperature and pressure at heights of 70-115 km. Orig. art. has: 4 figures, 13 formulas and 6 tables.

ASSOCIATION: MEZHDOVEDOMSTVENNYY GEOFIZICHESKIY KOMITET AN SSSR (Interdepartmental Geophysical Committee)

SUBMITTED: 00

DATE ACQ: 16Apr64

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Card 2/5

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AEDC(a)/SSD/SSD(b)/BSD/AFWL/APSTR/APTC(a) GM  
ACCESSION NR: AR4049322 S/0269/64/000/008/0073/0073

SOURCE: Ref. zh. Astronomiya. Otdel'nyy vyp., Abs. 8.51.473

AUTHOR: Kramer, Ye. N.; Vorobyeva, V. A.; Rudenko, O. A.

TITLE: Work by the meteor patrol of Odesskaya Astronomicheskaya Observatoriya  
(Odessa Astronomical Observatory) during the International Geophysical Year

CITED SOURCE: Tr. Odessk. un-ta. Izv. Astron. observ., v. 152, No. 2, 1963, 5-63

TOPIC TAGS: upper atmosphere, astrophysics, meteor patrol, meteor orbit, meteor stream, comet, atmospheric density

TRANSLATION: This paper presents the results of an analysis of photographic observations of meteors during the International Geophysical Year. Base photographs of 106 meteors were obtained. Heliocentric orbits were computed for 90 of these; 41 of the meteors belonged to known meteor streams and the others were sporadic meteors. A study was made of the distribution of meteor orbits in space and the relationship between meteor streams and comets. Ten of a total of 90 meteors had hyperbolic orbits. An attempt was made to explain the presence of meteor bodies moving in hyperbolic orbits on the basis of processes occurring near the earth. Results of computations of atmospheric density on the basis of

Card 1/2

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meteor observations are presented in the form of tables and graphs; these results coincide with data from rocket measurements for heights of 85-95 km. The article gives a description of a method for determining the flight time of a meteor using an obturator with a variable cross section. Bibliography of 32 items. P. Babadzhanyov.

SUB CODE: AA

ENCL: 00

Card 2/2

L 15975-66 FSS-2/EWT(1)/EWA(d)/T IJP(c) GS/GW

ACC NR: AT5027128

SOURCE CODE: UR/0000/65/000/000/0057/0060

AUTHOR: Kramer, Ye. N.

ORG: none

TITLE: Use of instantaneous exposition during photographing of meteors

SOURCE: AN SSSR. Astronomicheskii sovet. Komissiya priborostroyeniya. Soveshchaniye. Kazan, 1964. Novaya tekhnika v astronomii (New techniques in astronomy); materialy soveshchaniya, no. 2, Moscow, Izd-vo Nauka, 1965, 57-60

TOPIC TAGS: astronomy, meteor, photography, optic system, photographic

ABSTRACT: The fact that not a meteor<sup>12.55</sup> but the path of its flight was fixed on the photosensitive layer (with the image of meteor completely blurred) was the main disadvantage in contemporary methods of meteor photography. The optical system used for photography, however, was capable of resolving objects with a linear size >20-50m at a distance of 100-150 km. At the exposure of 1 millisecond, the dis-

Card 1/3